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ABSTRACT

In 1975 Unesco, with the cooperation of the United Nations Environment Programme (UNEP), launched the current International Environmental Education Programme (IEEP). The initial 3-year phase of the IEEP was fundamentally that of promoting and stimulating environmental education among Unesco member states by (1) elaborating concepts, goals, and objectives of environmental education (EE) for its more effective orientation and implementation internationally; (2) developing background research and basic documentation on world needs, priorities and trends in EE; (3) collecting, organizing, and distributing EE information; and (4) convening a series of expert meetings. IEEP actions from its beginnings to the present time are discussed as related to three complimentary domains: development of general awareness of the necessity of EE; development of concepts and methodological approaches in this sphere; and efforts to incorporate an environmental dimension into the educational processes of member states. Highlights of IEEP research/experimentation and a list of IEEP pilot projects, personnel training workshops, meetings, and publications/reports are included. Reports of environmental education activities in African countries (Benin, Congo), Sri Lanka, the United States, and the USSR are also presented. (JN)

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Connect

UNESCO-UNEP ENVIRONMENTAL EDUCATION NEWSLETTER

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Actions of the International Environmental Education Programme 1975-1983

In 1975 Unesco, with the cooperation of UNEP (the United Nations Environment Programme), launched the current International Environmental Education Programme (IEEP) in response to a recommendation of the UN Conference on the Human Environment, Stockholm, 1972. Specifically, Recommendation 96 called on "the organizations of the UN system, especially Unesco... to take the necessary steps to establish an international programme in environmental education, interdisciplinary in approach, in-school and out-of-school, encompassing all levels of education and directed towards the general public".

The initial three-year phase of the IEE Programme was fundamentally that of promoting and stimulating environmental education among Unesco Member States. This primarily involved (1) elaboration of the concepts, goals and objectives of EE for its more effective orientation and implementation internationally; (2) development of background research and basic documentation on world needs, priorities and trends in EE; (3) collection, organization and distribution of EE information, involving establishment of a network system and the IEEP newsletter *Connect*; and (4) convening a series of expert meetings, beginning with the international workshop at Belgrade, 1975, followed by meetings in every region of the world, culminating in the ministerial-level Intergovernmental Conference on Environmental Education, held in Tbilisi, USSR, October 1977.

The Declaration and recommendations of the Tbilisi Conference have since constituted the framework, principles and guidelines for EE at all levels and for all age groups, both inside and outside the formal school system. The Tbilisi Conference also confirmed the aims and priorities of the International EE Programme and the continuation of its activities.

The results which can be attributed to the actions of the IEEP from its beginning to the present time (for a previous report see *Connect*, March 1982) might be best apprehended in three complementary domains: (1) development of general awareness of the necessity of EE; (2) development of concepts and methodological approaches in this sphere; and (3) efforts to incorporate an environmental dimension into the educational processes of Member States.

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One of the actions contributing most to the development of international *awareness* was the series of international and regional expert meetings which led, as mentioned, to the Tbilisi Conference. Another has been the policy of regularly supplying information, as, for instance, to this newsletter's mailing list of some 12,000 individuals and institutions throughout the world, in one of its five languages (Arabic, English, French, Russian and Spanish).

As for the clarification of *EE concepts and methodology*, the IEE Programme has done much in this regard since 1977, particularly by organizing workshops, seminars, courses, research and action projects in every region with emphasis on the interdisciplinary and problem-solving approach of this important field of education. Participants and others have also learned to regard the environment as a totality, natural and built, social, economic, etc., and to include all these aspects in education for preservation and improvement of the environment.

Similarly the IEEP has significantly aided efforts of Member States to *incorporate the environmental dimension* into their educational practises. For instance, during implementation of IEEP pilot projects, or after national training workshops, national coordinating committees were often established at the ministerial or lower level. More specifically, the contribution of the IEE Programme to the integration of EE into national educational practises has borne on two aspects of education: firstly, the development of content, methods and teaching materials and, secondly, teacher training.

As for *teacher training*, the IEEP has organized, especially since 1978, a series of regional and subregional training workshops aimed at key personnel – administrators, curriculum developers, teacher educators, et al. The workshops have dealt with the formulation of national EE policies, development of pre- and in-service teacher training and the formulation of guidelines for the preparation of EE materials. Regarding development of *EE content, methods and materials*, the Programme has carried out a number of research activities which have produced a coherent body of teaching materials, including methodological guides and textbooks, and has developed a series of modules for the EE training and retraining of teachers as well as for EE practise at primary and secondary school levels. In addition surveys and guides have been prepared on the use of the modular and simulation approaches to EE and on ways and methods for evaluating EE. Moreover, an international glossary has been prepared in several languages to standardize EE terminology. Lastly, the various pilot projects have raised environmental awareness and aided in training groups of educators and contributing to the development of local teaching materials.

The *multiplying effect* of the Unesco-UNEP IEEP is worth special mention. Since its inception, it has been working cooperatively with UN agencies and other international governmental and nongovernmental organizations for furthering EE internationally. Meetings have been held for this purpose. Today, a growing number of international and regional organizations incorporate EE into their plans and programmes.

Based on almost nine years of experience and achievements and in accordance with the major orientations it has developed, the International EE Programme continues to follow an integrated strategy, articulating in a coherent way: (1) the training of personnel for formal and nonformal EE; (2) the development of EE programmes, materials and instructional aids; and (3) the exchange of information and experience among persons and institutions active in the field of EE.

A summary listing of the IEEP's actions follows.

Research and Experimentation

Studies and surveys completed or ongoing: survey on EE needs and priorities of Member States; survey on progress of EE since Tbilisi Conference; survey on teacher training related to EE; survey on curriculum development for EE; study on EE and social studies; study on EE and the arts; study on integration of EE at university level (natural sciences); study on integration of environmental dimension into school curricula and teacher training in technical and vocational education; study on development of nonformal EE.

Future study activities: study on integration of EE at university level (social sciences and technology); study on in-school team teaching approaches; study on approaches to communication of appropriate techniques and know-how for the EE of adults.

Research activities in progress: research on incorporation of EE into polytechnical schools; research on incorporation of EE into civic education; research on incorporation of EE into biology and geography; experimental project on integration of EE into mass media programmes.

Future research activities: experimental project on integration of environmental dimension into social studies; experimental project on integration of environmental dimension into university education (natural sciences and social sciences); experimental project on integration of environmental dimension into technical and vocational education (agriculture and industry); experimental project on integration of environmental dimension into nonformal education (literacy).

Pilot Projects

(For details, see *Connect*, May 1978 and June 1981)

Pilot Projects Completed: (1) Pilot Project for Rural Populations, Colombia (1976-1979); (2) Pilot Project for Rural Schools and the General Public, Guatemala (1977-1980); (3) Pilot Project in Methodologies for Secondary Schools, France (1976-1978); (4) Pilot Project for Secondary Schools in Marginal Urban Settlements, Peru (1976-1979); (5) Pilot Project for the General Public, Mongolia (1978-1979); (6) Pilot Project for Primary Schools and the General Public, Jordan (1978-1980); (7) Pilot Project for Secondary Schools and the General Public, Ukrainian SSR (1977-1979); (8) Pilot Project on Environmental Education Network for Secondary Schools, USA (1976-1977); (9) Pilot Project for Primary Level Teachers, Ghana (1977-1980); (10) Pilot Project for Secondary School Teacher, United Kingdom (1977-1978); (11) Pilot Project for [illegible]mary Schools, Afghanistan (1977-1980); (12) Pilot Pr[illegible]t for Primary Schools and the General Public, Indonesia (1977-1980); (13) Pilot Project for Primary Schools, India (1979-1980); (14) Pilot Project for Youth Associations and Clubs, Egypt (1978-1981); (15) Experimental Project for the School System, Czechoslovakia (1979-1981; first phase); (16) Pilot Project for Primary and Secondary Schools, Peru (1979-1981);

(17) Pilot Project for Secondary Schools, Kenya (1978-1981); (18) Pilot Project for Primary School Teachers and the General Public, Costa Rica (1979-1981); (19) Pilot Project for Adult Population of the Sahel Region, Senegal (1977-1982); (20) Pilot Project for Schools and the General Public, Upper Volta (1980-1982); (21) Pilot Project on Meteorological Disasters for Primary School Teachers and the General Public, Dominican Republic (1979-1982).

Pilot Projects in Process: (1) Pilot Project for Formal Environmental Education, Cuba (1981-1983); (2) Pilot Project on Environmental Education Problems of Urban Marginal Areas, India (1981-1983).

Training of Personnel

National training workshops: Korea (1978), Brazil (1979), Cuba (1979), The Philippines (1979), Bulgaria (1979), Chile (1979), Upper Volta (1979), Lebanon (1980), Argentina (1980), Senegal (1980), Poland (1980), Central African Republic (1980), Bangladesh (1981), Jamaica (1981), Ukrainian SSR (1981), Guyana (1981), Sierra Leone (1981), Hungary (1981), Benin (1982), China (1982), Egypt (1982), Rwanda (1982), Nepal (1982), Ecuador (1982), Byelorussian SSR (1982), Sri Lanka (1983), Sudan (1983), Yugoslavia (1983), Malawi (1983), Morocco (1983), Oman (1983).

National training workshops under preparation: USSR, Ethiopia, Ivory Coast, Zaire, Guinea-Bissau, Malta, Syria, Tunisia.

Subregional training workshops: Subregional Training Workshop for the Caribbean, Antigua (1980); Subregional Workshop on Teacher Training in Environmental Education in Europe, Prague, Czechoslovakia (1980); Subregional Workshop on Teacher Training in Environmental Education, New Delhi, India (1983); Subregional Workshop on Teacher Training in Environmental Education, Mona, Jamaica (1983).

Regional training workshops: Regional Training Workshop for Africa, Dakar, Senegal (1978); Regional Training Workshop for Latin America, San José, Costa Rica (1979); Regional Training Workshop for Asia, Thailand (1980); Regional Training Workshop for Europe, Essen, Federal Republic of Germany (1980); Regional Training Workshop for the Arab States, Bahrain (1981).

International Training Course in Environmental Education for Key Personnel from Developing Countries, Prague, Czechoslovakia (1982).

Future training activities: regional training seminar on integration of environmental dimension into general education at university level; subregional training seminars in nonformal EE; subregional workshop on teacher training in EE; consultative meeting on the training of technical and vocational education teachers in EE; consultative meeting on the training of educational planners in EE; support to national experimental training activities for teachers.

Meetings

Meetings organized by IEEP: International Workshop on Environmental Education, Belgrade, Yugoslavia, October 1975; Regional Meeting of Experts on EE in Africa, Brazzaville, People's Republic of the Congo, September 1976; Regional Meeting of Experts on EE in Latin America and the Caribbean, Bogota, Colombia, November 1976; Regional Meeting of Experts on EE in the Arab States, Kuwait, November 1976; Regional Meeting of Experts on EE in Asia, Bangkok, Thailand, November 1976; Regional Meeting of Experts on EE in Europe, Helsinki, Finland, January 1977; Intergovernmental Conference on Environmental Education, Tbilisi, USSR, October 1977; International Seminar on Education and the Environment, Budapest, Hungary, 1980; International Expert Meeting on Progress and Trends in EE since the Tbilisi Conference, Unesco, Paris, September 1982; International Symposium on EE, Bulgaria, October 1983.

Meetings supported by IEEP: International Conference on Environmental Education, New Delhi, India, December 1981; Regional Conference on EE Transfers from ASEAN Universities, Serdang, Malaysia, August 1981; Conference on the International Union of Biological Sciences, Canada, 1982; Regional Workshop on EE and the Training of Ecologists in the African Francophone and Lusophone Countries, Kisangani, Zaire, May 1982; World Conference on EE in Developing Countries, Cairo, Egypt, April 1983; Symposium on "Long-term Development of Environmental Policy and Environmental Education in Europe", Vienna, Australia, June 1983; European Seminar on the Role of the University in EE, Budapest, Hungary, October 1983.

Publications and Reports

Publications of IEEP

Trends in Environmental Education, 1977 (Arabic, English, French, Russian, Spanish); *Education and the Challenge of Environmental Problems*, 1977 (Arabic, English, French, Russian, Spanish); *International Programme in EE*, 1977 (Arabic, English, French, Russian, Spanish); *Needs and Priorities in EE: An International Survey*, 1977 (Arabic, English, French, Russian, Spanish); *Regional Meetings of Experts on EE: A Synthetic Report*, 1977 (Arabic, English, French, Russian, Spanish); *Major Environmental Problems in Contemporary Society*, document prepared by the United Nations Environment Programme, 1977 (Arabic, English, French, Russian, Spanish); *The United Nations Environment Programme and its Contribution to the Development of Environmental Education and Training*, 1977 (Arabic, English, French, Russian, Spanish); *Environmental Education in the Light of the Tbilisi Conference*, 1980 (Arabic, English, French, Spanish); *EE in Asia and the Pacific*, Bulletin of the Unesco Regional Office for Education in Asia and the Pacific, June 1981; *International Directory of Institutions Active in the Field of EE*, revised and enlarged edition, 1981; *Trends in EE since the Tbilisi Conference*, Environmental Education Series No.1, 1983 (English, French); *EE Glossary*, 1983 (English, Russian); *Directory of EE Periodicals*, 1983 or 1984 (English, French, Spanish); *Directory of EE Projects and Activities*, 1984 (English, French, Spanish); *Thesaurus of EE Terms*, 1984 (English, French, Spanish); *Annotated Bibliography on EE*, Unesco: IBE, 1976 (1st edition, English, French); *Annotated Bibliography on EE*, Unesco: IBE, 1980 (2nd edition, English, French, Spanish); quarterly issues of the newsletter **Connect**, 1976 (Arabic, English, French, Russian, Spanish); *International Survey on Teacher Training in EE*, 1984 (English).

Humanity and the Environment: A Sourcebook in Environmental Education, 1983 or 1984 (English, Russian); *Sourcebook in Nonformal EE*, 1985 (English);

Experimental Module on Environmental Problems in Cities, 1983 (English); *Module expérimental sur l'utilisation et la conservation des ressources naturelles*, 1983 (French); *Experimental Module on Desertification*, 1983 (English, French); *Experimental Module on Health, Nutrition and the Environment*, 1984 (English, Spanish); *EE Audiovisual Package for Adults*, 1984 (English, French); *EE Module for Pre-service Training of Primary School Teachers and Supervisors*, 1983 (English); *EE Module for In-service Training of Primary School Teachers and Supervisors*, 1983 (English); *EE Module Pre-service Training of Science Teachers and Supervisors for Secondary Schools*, 1983 (English); *EE Module for In-service Training of Science Teachers and Supervisors for Secondary Schools*, 1983 (English); *EE Module for Pre-service Training of Social Studies Teachers and Supervisors for Secondary Schools*, 1984 (English); *EE Module for In-service Training of Social Studies Teachers and Supervisors for Secondary Schools*, 1983 (English); *L'équilibre du vivant: une approche éducativo-environnementale intégrée*, 1983 (French); *Nutrition, santé et environnement: une approche éducative pour l'Amérique latine*, 1984 (French, Spanish); *Module d'EE sur l'eau et son utilisation*, 1984 (French).

Teacher's Guide in Environmental Education, 1984 (English, French); *Suggestions for Developing a National Strategy for EE, a Planning and Management Process: A Discussion Guide for Training Workshops on EE*, 1980 (English); *Strategies for Developing an EE Curriculum: A Discussion Guide for Training Workshops*, 1980 (English); *Strategies for the Training of Teachers in EE: A Discussion Guide for Training Workshops on EE*, 1980 (English); *Manuel sur l'utilisation de l'énergie*, 1983 (French); *Guide on the Use of Simulation and Gaming for EE*, 1983 (English); *Guide sur l'utilisation de l'approche modulaire en éducation relative à l'environnement*, 1983 (French); *Guide on Environmental Value Education*, 1984 (English); *Guide on Evaluation of EE Activities*, 1984 (English); *Guide on Integration of An Environmental Dimension into Social Studies in School*, 1984 (English); *Guide sur l'intégration d'une dimension de l'environnement dans les études artistiques à l'école*, 1984 (French); *The Interdisciplinary Approach in EE*, 1983 (English, French); *Stratégies pédagogiques axées sur la solution de problèmes pour l'éducation non formelle relative à l'environnement* 1983 (French); *Strategies multimédia pour la communication de messages environnementaux en Amérique latine: le cas des écoles radiodiffusées colombiennes*, 1983 or 1984 (French, Spanish).

Reports

Final Reports on each of the following: International Workshop on EE, Belgrade, Yugoslavia, October 1975 (English, French, Spanish); Regional Meeting of Experts on EE in Africa, Brazzaville, People's Republic of the Congo, September 1976 (English, French); Regional Meeting of Experts on EE in Latin America and the Caribbean, Bogota, Colombia, November 1976 (English, Spanish); Regional Meeting of Experts on EE in the Arab States, Kuwait, November 1976 (Arabic, French); Regional Meeting of Experts on EE in Asia, Bangkok, Thailand, November 1976 (English); Regional Meeting of Experts on EE in Europe, Helsinki, Finland, January 1977 (English, French, Russian); Intergovernmental Conference on EE, Tbilisi, USSR, October 1977 (Arabic, English, French, Russian, Spanish); Regional Training Workshop on EE in Africa, Dakar, Senegal, December 1978 (English); Regional Training Worshop on EE for Latin America, San José, Costa Rica, 29 October – 7 November 1979 (English, Spanish); Regional Training Workshop on EE for Asia and the Pacific, Bangkok, Thailand, September 1980 (English); Regional Training Workshop on EE in Europe, Essen, Federal Republic of Germany, December 1980 (English); Subregional Training Workshop on EE for the Caribbean, Antigua, June 1980 (English, Spanish); Subregional Workshop on Teacher Training for EE in Europe, Prague, Czechoslovakia, October 1980 (English); Séminaire régional de formation sur l'EE pour les Etats arabes, Manama, Bahrain, 1981 (French); International Training Course in EE, Prague, Czechoslovakia, September 1982 (English, French); International Expert Meeting on Progress and Trends in EE since the Tbilisi Conference, Unesco, Paris, September 1982 (English, French); Subregional Workshop on Teacher Training in EE, New Delhi, India, Marchs 1983 (English); Subregional Workshop on Teacher Training in EE, Mona, Jamaica, July 1983 (English); and Report on the Results of EE Pilot Projects, 1983 (English, French).

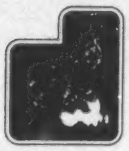
Publications supported by IEEP

Vers une éducation relative à l'environnement: Pilot Project Unesco-UNEP/France, 1978 (French); *Módulo Educativo sobre la Salud, la Nutrición, la Higiene y el Medio Ambiente para Guatemala*. Pilot Project Unesco-UNEP/Guatemala, 1980 (Spanish); *Módulo Educativo sobre la Conservación de Recursos Naturales para Guatemala*. Pilot Project Unesco-UNEP/Guatemala, 1980 (Spanish); *Educational Module for Teachers of Primary Schools on Environmental Problems*. Pilot Project Unesco-UNEP/Indonesia, 1980 (Bahasa Indonesia); *Educational Module for Pupils of Primary Schools on Environmental Problems*. Pilot Project Unesco-UNEP/Indonesia, 1980 (Bahasa Indonesia); *Historietas sobre la Prevención de Riesgos Sísmicos para los Jóvenes*. Pilot Project Unesco-UNEP/Peru, 1981 (Spanish); *Lectures on EE*. International Training Course Unesco-UNEP/Czechoslovakia, 1983 (on the press: English, French).

Regional and Country Reports in *Connect*

Regional and country reports which have appeared in *Connect* since the Tbilisi Conference of 1977 follow, with the name of the region and country first and then the issue(s) of *Connect*. To these have been added the country reports appearing in the present September 1983 issue.

African Region: September 1981, March 1982; Benin: September 1983; Congo: September 1983; Ethiopia: June 1983; Senegal: December 1979, March 1983; Sierra Leone: March 1983; Uganda: June 1980; Upper Volta: March 1980, June 1983. *Arab States*: Arab Gulf States: June 1983; Egypt: March 1983. *Asian Region*: December 1979, March 1980, September 1981, June 1982; Australia: September 1980; China: December 1982; India: March 1983; Indonesia: June 1983; Japan: June 1980, March 1983; Sri Lanka: September 1983. *Europe and North America*: Bulgaria: June 1982, March 1983; Federal Republic of Germany: March 1983; Finland: March 1983; German Democratic Republic: June 1980; Poland: June 1983; Sweden: June 1983; USA: June 1979, September 1983; USSR: March 1979, September 1983. *Latin America and the Caribbean*: Argentina: June 1983; Costa Rica: March 1983; Dominican Republic, March 1981.



African Country Reports on Environmental Education

Benin

Generally in African countries one does not think of education separately from the environment. Traditionally the individual is taught to regard the natural surroundings as an ally with virtually religious affection. It was not until accelerated development occurred, often with imported technics, that there was a rupture in the harmonious relationship of Africans and their environment. In the Popular Republic of Benin there has been a conscious effort to renew the old tradition in modern times, as particularly reflected in the last Reform Act in Education and Instruction, dated 1976.

The school has been linked at all levels to the local environment as an essential "unit of production" in the community's global development. As is stated in the National Programme for Edification of the New School, "There is no school problem to be solved in isolation; there is only a problem of development of which the school problem is an important component". One of the results has been the favouring of a multidisciplinary approach to instruction which is essential to and characteristic of environmental education.

To concretise the principle of linking school and the environment two experimental projects are being developed in Benin, both supported by Unesco. The first is titled "Education and Development" and involves primary-school educational methodologies and materials. The second is "The Comé Pilot Project" (Comé is a rural center), which concerns secondary-school education, particularly use of local resources and the liaison of intellectual and productive labor. Both projects undergo evaluation as they are developed and bring together teachers and nonteachers in a demonstration of school-community cooperation. Among the materials being produced are teachers' guides. The guide for 3rd and 4th years of primary school, for example, is to be titled "Study of the Environment" and will deal with geographic and historical themes as well as direct observation of the surroundings.

As for nonformal EE, several of Benin's ministries – Public Health, Rural Development, Popular Culture, etc. – have estalished centres for lifelong education with emphasis on rural areas. The government deems this sector of primary importance in the nation's education and development, since it is in direct contact with the local environment and situation. Similarly a new attitude towards development which takes environment impacts into consideration, an essential characteristic of EE, is increasingly deemed essential. Here the articulation of university research and practical applications, especially in rural areas, will play a key role. This is already a reality in the field of medicine.

In general Benin has accepted the guidelines and principles of the Tbilisi Conference on Environmental Education as its own and is in the process of implementing them.

Congo

Environmental education is considered a necessity by the government of the People's Republic of Congo for the successful achievement of its national environmental policy. This has been particularly true since the African Regional Meeting on EE, which was held in Brazzaville, 11-16 September 1976, within the framework of the International EE Programme (See *Connect*, March 1977). As one result, the Congolese government established an EE service attached to the office of the Director-General of the Environment, whose principal objective is information of the public through conferences, seminars, articles in the local press, etc. Additionally, the National Man and the Biosphere (MAB) Committee includes EE activities in the execution of its programme.

Currently the Congo is engaged in a number of projects and actions in the promotion and implementation of EE. Among them are identification and analysis of the country's principal environmental problems as well as the institutions and mechanisms most suited for education about them. Here the experimental "people's school" approach, now being conducted, is specially pertinent. It involves a general reform of the nation's educational philosophy and practice, based largely on linking the school to the local environment and work life. The training of environmental specialists continues to be a principal concern of the nation's university (land management, appropriate technologies, etc.). A documentation centre has been established to provide supporting EE materials.

Future plans for the Congo involve the organisation of a national EE seminar for key personnel, since the basic problem of incorporating an environmental dimension into education, inside and outside the school system, remains to be solved. In this connection, the Environmental Education Service is studying the feasibility of a regular newsletter on both national and international EE experiences as well as a general public information programme involving posters and the like. Limited resources are the major constraint.

Asian Country Report on Environmental Education

Sri Lanka

Environmental themes began to be introduced into the school curricula of Sri Lanka in the early 70s. The courses initially chosen were science, social studies, health and agriculture in the upper secondary. Special emphasis on population aspects of the environment was added in the mid-70s.

A particular innovation in the EE activities of the country has been the work conducted by the Field Study Centre Programme of the Ministry of Education. Under this programme pupils are exposed to actual environmental situations in forest reserves and lagoons and on river banks, where the Field Study Centres themselves are situated. The centres are provided with laboratories and museums and the necessary teaching-learning equipment, including overhead and sound-slide projectors, television sets, video recorders and cameras. Camp conditions prevail in the centres, of which there are currently seven in Sri Lanka.

In addition to the formal EE offered by the Field Study Centres, a population programme has been developed by the Policy Co-ordination Branch of the Ministry of Education which links junior secondary curricula to local environments and situations. A third programme has been launched by the Sports and Extracurricula Branch, that of forming school project clubs which include EE among their activities.

Although there are not yet regular nonformal EE programmes for the general public, press, radio and television frequently feature environmental problems (primarily deforestation) and their solutions. They sometimes join in offering environmental competitions. Various governmental bodies, such as the Coast Preservation Board, the Mahawali Development Authority, the Forest and Wild-Life Departments, conduct EE activities in their specific areas of concern.

EE plans for the future include widening and expansion of the Field Study Centre Programme to cover more levels of school education and a greater area of the country. Use of the mass media will be increased so as to reach the nonschool population more effectively, aided by the comparatively high literacy rate of 85 % for the population of Sri Lanka.

Europe-North America Country Reports on Environmental Education

USA

The 1970s could be called the Environmental Decade for the United States of America, so much environmental legislation was enacted during these years (see *Connect*, June 1979, for a previous report). It was immediately preceded by one of the most far-reaching initiatives, namely, the National Environmental Policy Act of 1969, which enjoined all federal government agencies from taking any major action that might harm the environment without also considering how to mitigate the harm of those actions. Immediately following was the Environmental Education Act of 1970 and the creation of the Office of Environmental Education, which, among other things, developed a model EE curriculum for schools (the Regional Environmental Learning System or RELS), based on more than 700 EE programmes which the Office had funded.

Since 1981, however, the EE Office has no longer existed and EE for local school districts is otherwise funded and promoted by the federal government. The Soil Conservation Service of the Department of Agriculture, for instance, is one of the most active agencies in this regard, dealing with more than 4,000 requests a year nationally and even more at the local and state level. The Interior Department's Fish and Wildlife Service and National Park Service are similarly active agencies for EE. Over half a million teachers and students participate yearly in programmes established by the Park Service in National Environmental Study Areas. The Federal Interagency Committee on Education has an EE Subcommittee which maintains communication among the more than 40 federal agencies engaging in educational activities.

Each of the fifty states of the United States has a department of education with an EE coordinator. Several states have developed particularly successful EE programmes not wholly dependent on federal funding. California, for example, conducts its state programme along the lines of the former EE Office's model curriculum (RELS). It has developed EE guidebooks organized around four major theme-areas: natural

environment: built environment: social institutions and decision-making: and energy and environmental resource management. They are designed for education from kindergarten through the twelfth grade or year (K-12) and incorporate over 200 activities to encourage incorporation of environmental concepts into existing curricula.

Two important societies of EE educators are the Conservation Education Association (CEA) and the Alliance for Environmental Education, the latter a consortium of over 30 nongovernmental organizations (NGOs). The CEA is developing a Human-Habitat Project to which leading U.S. environmental educators are contributing and which aims at a series of EE textbooks and supporting materials for use from kindergarten through the university. The three major themes that have thus far emerged are culture, nature and the ethics of decision-making. A TV series comparable to the Cosmos series is planned to reinforce classroom work by being available to schools, individuals, institutions and TV networks and video machines. The CEA and the EE Alliance are jointly convening a general EE conference on a national scale which is scheduled for the summer of 1983.

At the **university level** there are a number of EE institutions of considerable influence and scope, notably the University of California at Santa Barbara; the School of Natural Resources at the University of Michigan, which includes EE teaching, mass communication and community organizing and offers a master's degree programme; the University of Virginia, which developed the model EE curriculum RELS for the Office of Environmental Education; the University of Wisconsin at Green Bay and at Madison, particularly; the School of Forestry and Environmental Studies of Yale University, which provides postgraduate studies leading to master's degrees in the fields of legislation, policy, planning, education and general management of natural systems.

Nonformal EE constitutes an exceptionally important part of EE in the United States. Environmental organizations, museums, aquaria and the mass media in general reach a majority of the population. One of the largest conservation societies, the National Wildlife Federation, has a number of periodicals with a reading public beyond its 4.6 million members. Every year the Federation sponsors a Wildlife Week, typically distributing a half million education kits and almost two million posters. There are ninety-six EE publications available as well. In collaboration with schools, the Federation has developed EE projects, materials and teacher-training workshops. It has also established various nature centres with extensive local EE programmes, several wildlife camps and training programmes for youth leaders.

The National Audubon Society provides EE through its education centres, adult ecology camps, field programmes and film/lectures series. There are almost 500 local chapters. Another EE approach has been taken by the American Institute of Architects, which has provided materials on the built environment to teachers for many years. It now promotes an on-site programme concerning the urban environment and has recently published a sourcebook as part of its "Learning by Design" activities for environmental educators. Since 1981 it has been sponsoring community teacher-architect workshops. The Centre for Environmental Education has developed programmes and materials for all ages and levels inside and outside the school system, including puppet shows, video cassettes, radio announcements, colourful posters and taped TV shows.

Many of the 6,700 museums of the country have initiated environmental interpretative programmes as well as nature exhibits for school children and others. Similarly, many of the nation's aquaria have added educational programmes and freely available materials to their permanent displays of the aquatic world.

The contribution of the mass media – press, radio and television – to the environmental education of the general public has been so marked that it is now taken for granted. There is scarcely a newspaper that does not have a reporter specializing on national and local environmental problems. Increasingly, however, environmental educators concerned about public EE are exploiting the new communication techniques of a rapidly developing audiovisual technology, most notably the combination of television set, videoscope and microcomputer – the last mentioned for the possibilities it offers for direct individual participation in environmental games and simulation.

USSR

The prevention and solution of environmental problems in the Soviet Union are regarded as among the nation's most important political, economic and social tasks. The Constitution of the USSR itself states that "in the interest of present and future generations the necessary measures are being taken by the USSR to ensure the conservation and rational utilization of the environment". Environmental education is considered essential for that task (see *Connect*, March 1979, for a previous report on EE in the USSR).

One of the most important acts since the Tbilisi Conference of 1977 has been the creation of the All-Union Environmental Education Section of the State Committee on Science and Technology. It currently brings together 50 leading specialists in the field (scientists, educators, academicians, administrators, etc.) from every part of the USSR, who meet regularly three or four times a year. It is the principal coordinating body for EE at all levels throughout the country.

The EE Section initiated the Soviet Union's first country-wide conference on environmental education, which was held in Minsk, BSSR, July 1979 (see report in *Connect*, June 1980). It has since followed up by implementation of the 82 recommendations of the conference concerning (1) secondary and higher technical education, training and retraining of environmental specialists; (2) vocational education, teacher training, preschool and school education; and (3) activities in nature protection involving public organizations and the mass media. The EE Section plans to convoke a similar country-wide conference on EE in 1984. In the meantime there have been a number of meetings and seminars on environmental education in various republics of the USSR, notably the Estonian SSR in 1980. As a consequence, there has been a broadening of the concept of EE as going beyond simply conservation of nature to an encompassing of all aspects of the environment, both natural and built, thus requiring education in the social as well as the natural sciences.

Environmental education in this broader sense is particularly developed at the **secondary-school level** with allowances for widely varying local and regional environments. A scientific foundation for such EE was early laid by the Academy of Pedagogical Sciences through its Scientific Council. This was subsequently developed and implemented by the ministries of education of each of the country's constituent republics. Cultivation of the correct social attitude towards the environment on the part of the individual is considered basic in EE, involving inculcation of perception of the environment and of a sense of responsibility in its care and preservation. The latter, in turn, implies acquiring the requisite knowledge and skills. The approach has been both incorporation of the environmental dimension into existing disciplines and integration of the disciplines around the environmental theme so as to constitute a course on the environment, such as the Man and the Biosphere programme for the last year of secondary-school education. Again, these courses vary from one republic to the other according to the respective environmental situation.

After their eighth year of schooling, many students continue their education in vocational, technical or special secondary schools for another three years, learning a profession of their choice. Here the EE content is oriented specifically toward their special subject matter, as in agricultural schools, where erosion, soil preservation, pesticides and the like are instructed. Practical activities in the field are also given emphasis as well as organization of students into associations for the protection of their environments.

At the **upper level**, similarly, EE content varies according to the subject matter emphasized, such as law, medicine, pedagogics, etc. Environmental specialists themselves are prepared at this level on both a pre-service and in-service basis, from an initial orientation course to further depth in their specialty. General courses, such as history and politicial economy, are given an environmental content as well. The approach is interdisciplinary *and* monodisciplinary, as, for instance, in a course titled "Safeguarding Nature", first given in the Biology Faculty of Moscow University. It has now been extended to 90 % of the USSR's higher institutions of learning. Specialists are instructed in such subjects as biological and geographical aspects of the rational use of resources, water purification, fisheries, the economics of forestry, recycling of materials, etc. Engineers, among much else, are taught to assess the environmental impact of their work in mining, industry, agriculture and other sectors as well as the development of pollution-free technology. The retraining of environmental educators is getting particular attention because of the increasing need of them. Normally the EE programme for specialists constitutes 120-140 hours of which 60-70 involve the preparation of a doctoral thesis, 25-30 hours of practical and laboratory work and 35-40 for classwork towards the diploma.

Inclusion of the environmental dimension in **pedagogical institutions** is obligatory in such programmes as chemistry and biology, geography, preschool and primary school pedagogics and methodology, and appears increasingly in other programmes, such as history, philosophy and political economy as well as the social sciences. Special summer schools have also been established for retraining teachers and school administrators. The auditing of courses also permits the retraining of practising specialists. Many EE teaching materials have been developed in the past several years and include monographs by Soviet and non-Soviet authors.

Nonformal environmental education in the USSR is often organized by teachers as an out-of-school activity for their students. There are also environmental societies of young naturalists and others with EE conducted in various tourist and young "pioneer" camps, etc. Depending on regional needs, members are grouped in "green" or "blue" patrols for the protection of forests, water systems, park reserves and the like. In the Russian SFSR alone there are 6000 forestry schools with over 300.000 pupils and 1.200 camps which have 2.5 million hectares for study and field work. There are 30 million members of the Russian Society for the Safeguard of Nature and 30 million more in similar societies of the other republics. Lecture teams have been formed for public EE which have organized several million educational talks and encounters. Adults also receive EE in "people's universities". Philosophic, pedagogic, geographic and other special associations conduct EE among their members and outsiders. The society called *Knowledge* is particularly active with a lecture and publishing programme of considerable extensity in all the republics. Its publications, for instance, are distributed in terms of a million and a half copies each. The mass media, specially radio and television, are playing an increasingly important role in public EE while environmental periodicals, such as *Nature* and *Nature and Man* continue to have a wide circulation. As for audiovisual EE materials, from 1977 to 1980 alone there have been 150 films produced on environmental themes, both feature length and shorts. To this should be added the constantly augmenting production of slides and slide talks.

More country reports will appear in succeeding issues of *Connect*.

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